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November the absence of continuous spectrum left very little of the light of the star in the $\lambda 5600$ region. The "effective wave-length" therefore of the integrated light being determined to a considerable extent by the strong bands at $\lambda 4365$ and $\lambda 5007$, was decidedly shorter than for an ordinary star. Hence the focal length as determined by the eye was longer. In February the presence of the continuous spectrum and, to a less extent, the weakening of the two bands referred to, brought the effective wave-length back to that of an ordinary star. The change should be accompanied by a certain amount of change in color, and Professor BARNARD states that the star, which appeared bluish-white in October, was white in February.

A marked feature of the February photograph of the spectrum is the very great intensity of the principal series line of hydrogen at $\lambda 4686$. It is fully equal to the chief nebular line at $\lambda 5007$.

W. S. ADAMS and F. G. PEASE.

NOTES ON THE ONE-HUNDRED-INCH TELESCOPE.

During the winter no very large amount of optical work has been performed on the 100-inch disk, altho the spherical figure has been nearly perfected. It has been found impossible to guard completely against the wide variations of temperature due to weather changes in the winter months, and accordingly it has seemed preferable to delay some of the work requiring the greatest accuracy until conditions are more favorable. In the meantime the 60-inch plane mirror to be used in testing the parabolization of the large disk has been completed. In addition, certain changes have been made on the grinding machine to facilitate the use of a small tool in parabolizing.

The mounting has made considerable progress at the Fore River Shipbuilding Works at Quincy, Massachusetts. Among the portions already cast and machined are the north and south pedestals (the former in four sections), the mercury tanks and floats, and portions of the polar axis. Meanwhile the driving clock has been under construction in Pasadena and is nearly ready for assembling. According to present plans the entire mounting, with the exception of a portion of the tube and the driving mechanism, will be erected at Quincy previous to shipment.

The first carload of structural steel for the stationary part of the telescope building is expected within a few days. We hope to be able to erect on Mount Wilson during the coming summer this portion of the building, which will include the side walls and the rails upon which the dome will rotate. To facilitate the transportation of this material, as well as of the very large and heavy sections of the telescope mounting at a later date, considerable work has been done on the mountain road during the winter. Although this work has been much handicapped by remarkably heavy rainstorms, about five miles of the road has been widened by an average amount of four feet, the minimum width of the road-bed for this portion now being twelve feet. At the sharper turns deep excavations have been made to obviate the necessity for "backing" the motor trucks used in transportation. We expect to complete the widening of the remaining four miles of the road next winter.

W. S. ADAMS.

D. O. MILLS EXPEDITION.

Mr. ARTHUR A. SCOTT, Instructor in Mathematics in the Instituto Ingles, Santiago, Chile, has been appointed Assistant in the D. O. Mills Observatory on Cerro San Cristobal, Santiago.

W. W. CAMPBELL.

THE SPECTRUM OF η CARINÆ.

Located on the edge of the perforation in the great "Key-hole Nebula" are a number of faint stars, among which is the well-known variable η Carinæ, or η Argus, at present invisible to the unaided eye and only distinguished from its neighbors by its slightly greater brightness and deep red color. It has, however, not always been such an inconspicuous object. Of the fourth magnitude in 1677, when first observed by HALLEY at St. Helena, it appears to have risen to the second some eight years later. At the beginning of the last century it was again a star of the fourth magnitude. Then followed a period of violent changes in light. A maximum was attained in 1843, at which time it was only slightly inferior in brightness to *Sirius*. Slowly it declined to the first magnitude in 1856 and then rapidly descended until it became invisible to the naked eye in 1868.